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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

LORI.HASS@BASF.COM  
MARJORIE.ELLIS@BASF.COM  
ANNE.SABOURIN@BASF.COM

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/705,359	BARGNES ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	NADJA CHONG CRUZ	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 10 November 2003.

2a) This action is **FINAL**.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-32 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-32 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 10 November 2003 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date <u>10 Nov 2003 &amp; 27 Feb 2004</u> .	6) <input type="checkbox"/> Other: _____ .

**DETAILED ACTION**

**Status of Claims**

1. This is a Non-Final action in reply to the application filed on 10 November 2003.
2. Claims 1-32 are currently pending and has been examined.

**Priority**

3. Applicant's claim for the benefit of a prior-filed application, Application No. 09/602922, under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged.

**Claim Rejections - 35 USC § 112**

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification chart on page 21, seems to be the inverse of what is claimed, thereby not enabling a person to make/use the invention, because the production process efficiency results in the chart is calculated by dividing the total labor hours sold (e.g., the estimated total labor hours) by total shop production hours in order to obtain those percentages disclosed in the chart (e.g.,  $18/22 = 82\%$  instead of the formula claimed in claim 1, the solution should be  $22/18 = 122\%$ ). Therefore, the claimed invention seems to be the inverse formula disclosed in the specification.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1, 3-6 and 11-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claim 1 recites the limitation *calculating a production process efficiency for the completed repair process by dividing the total shop production hours by the estimated total labor hours thereby revealing a true efficiency of the repair process by calculating the production process efficiency in terms of hours*. The limitation *calculating a production process efficiency for the completed repair process by dividing the total shop production hours by the estimated total labor hours thereby revealing a true efficiency of the repair process by calculating the production process efficiency in terms of hours* is vague and indefinite because in dividing the total shop production hours by the estimated total labor hours the result yields a ratio that does not have any units because the units of hours would cancel each other out when the numbers are divided, therefore it is unclear what the unit of measurement for the ratio is supposed to be and further unclear as to how applicant derives hours as the units for the ratio. Appropriate correction is required.

9. As per Claim 1 recites the limitations *the completed repair process*, claims 3-6 and 11-14 recites the limitation *the number of days*, claims 4-6 and 12-14 recites the limitation *the number of hours*. There is insufficient antecedent basis for these limitations in the claims.

#### **Claim Rejections - 35 USC § 101**

10. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

11. Claims 1 – 32 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Based on Supreme Court precedent, a method/process claim must (1) be tied to another statutory class of invention (such as a particular apparatus) (see at least *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876)) or (2) transform underlying subject matter (such as an article or materials) to a different state or thing (see at least *Gottschalk v. Benson*, 409 U.S. 63, 71 (1972)). A method/process claim that fails to meet one of the above requirements is not in compliance with the statutory requirements of 35 U.S.C. 101 for patent eligible subject matter. Here claim 1 fails to meet the above requirements because the claim is directed purely to a method and do not recite any other statutory class of invention. Claims 2-32 inherit the same deficiencies as claim 1 and are therefore rejected for the same reasons as claim 1.

#### **Claim Rejections - 35 USC § 103**

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. Claims 1-22, 26 and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGuire et al (US 4,404,639) hereinafter McGuire in view of Inoue (US 5,317,503) further in view of Edwards, **More than a desk job**, *Body Shop Business*; Akron; April 1999; Vol. 18, Issue 4; pages 12, 100-115.

**Examiner's Note:** The Examiner has pointed out particular references contained in the prior art of record within the body of this action for the convenience of the Applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply. Applicant, in preparing the response, should consider fully the entire reference as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

**Claim 1:**

McGuire as shown discloses the following limitations:

- *creating a vehicle identifier for the vehicle* (see at least Figure 2A, column 4-5, lines 67-68 and 1-22 respectively, which Figure 2A illustrates a flow diagram when a vehicle arrives to a repair shop, an invoice is created therefore, the vehicle is identified. Furthermore, a new service invoice includes customer and vehicle information);
- *examining the identified vehicle to locate areas on the identified vehicle in need of repair* (see at least Figure 2B, column 6, lines 42-55, which Figure 2B illustrates a flow diagram of diagnosis and repair process, where the vehicle is connected to the analyzer, therefore the vehicle is examined in order to locate areas in need of repair. In addition, “[t]he analyzer will be provided with the necessary linking connections that will permit the analyzer to have all of the necessary condition signals that will permit the analyzer to diagnose the condition of the engine” where for example, the analyzer evaluates the condition of the vehicle engine);

- *estimating an extent of a repair for the identified vehicle based on the examination* (see at least Figure 2A, column 2, lines 63-66, which Figure 2A illustrates a “service estimate” where McGuire provides a “work flow involved in diagnosing and servicing a vehicle from the time a customer arrives for an estimate of charges until the invoice has been completed for that vehicle.”);
- *determining a total shop production hours based upon when the repair shop opened and closed for each day between the vehicle production start period and the vehicle production finish period* (see at least Figure 2C, column 9, lines 41-68 and column 14, lines 9-20, which Figure 2C illustrates a “Daily Recap” which “[t]he daily recap can be performed at any time, although it is assumed that the daily recap will be performed at the end of a working day” (e.g., repair shop closing time) “or at the beginning of the next working day”(e.g., repair shop opening time). McGuire suggests that during a daily recap, the user have information for example total sales, work orders completed (e.g., vehicle production periods) and service history, which it is implicitly disclosed that includes when the repair shop opens and closes each day with all the services and work orders completed because “[t]he system permits the operator to produce a tally of daily operations and work in progress to assist in maintaining an efficient service operation”. Furthermore, a daily recap display “work in progress, a monthly summary of work performed” (e.g., total shop production hours), “a service history for individual vehicles or a class of vehicles, a display of present work in progress, and a recap of parts failure history.”);

McGuire does not disclose the following limitations however Inoue as shown does:

- *and estimating a total labor hours to perform the repair process based on the extent of the repair* (see at least Figures 2, 9, 13 and 15-21, which Figure 2, illustrates the estimation process including the repair technical fee which it is

implicitly disclosed that labor hours are included in order to charge a technical fee.

Figures 9 and 10 illustrates a repair work item selection with operation time included, Figure 13 illustrates total operation time (e.g. estimated total labor hours) in order to perform a repair process, Figure 15 illustrates Operation Time total of technical fee, which a technical fee is calculated based on estimated total labor hours and labor rate in order to provide a complete repair estimation and Figure 16-21 which they illustrates an example of a written estimate);

- *determining a vehicle production start period based upon when the repair process of the identified vehicle begins* (see at least Figure 17, which it illustrates a “Date of Deposit” which Inoue suggests that the repair process of the identified vehicle begins on the date of deposit because it is implicitly disclosed that the vehicle production start period begins the day the vehicle is ready to be repaired, since an estimate is made when a vehicle needs a reparation);
- *and determining a vehicle production finish period based upon when the repair process of the identified vehicle ends* (see at least Figure 17, which it illustrates a “Date of Delivery” which Inoue suggests that the repair process of the identified vehicle ends on the date of delivery because it is implicitly disclosed that the date of delivery is the deadline to finish all reparation in order to deliver the vehicle to a customer);

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the method of Automotive Diagnostic System of McGuire with the apparatus for calculating a repair cost of a damaged car as taught by Inoue because McGuire and Inoue are from the same field of endeavor (vehicle/car repair process). The apparatus for calculating a repair cost of damaged car of Inoue “enables a worker to estimate a repair cost of a damaged car conveniently and accurately.” (Inoue, see at least column 1, lines 45-46) Furthermore, Inoue teaches that “the repair cost is obtained from the value of the work item and the part in the

section which is selected by the second means. For example, when the value is a work operation time, repair cost is obtained as the results of multiplying a cost per a work operation time by a total of work operation times. When the value is a price, a repair cost is obtained from a total of prices. Thus, a repair cost is estimated with convenience, accuracy and without an error." (Inoue, see at least column 2, lines 35-44).

The combination of McGuire / Inoue teaches the determination of total production hours and the estimated total labor hours as explained above. The combination of McGuire / Inoue does not disclose the following limitations however Edwards as shown, does:

- *and calculating a production process efficiency for the completed repair process by dividing the total shop production hours by the estimated total labor hours thereby revealing a true efficiency of the repair process by calculating the production process efficiency in terms of hours* (see at least page 111, Shop Effective Labor Rate, which Edward teaches that the shop effective labor rate is a measurement that "tells you how well the use of different labor rates is being maximized for different repairs" because this measurement considers "the total amount of hours paid to the technician divided into the total labor sales for a given period (usually weekly or monthly)" which Edward suggests that production hours are included in the total amount of hours paid to the technician and the estimated total labor hours are the total labor sold, therefore an efficiency rate is obtained);

Edwards doesn't have the specific formula of *dividing the total shop production hours by the estimated total labor hours*, but has a different one "the total amount of hours paid to the technician divided into the total labor sales for a given period" which accomplishes the same result of determining labor efficiency which determine how well the repair shop production process is performed.

Since each individual element and its function are shown in the prior art, albeit shown in separate references, the difference between the claimed subject matter and the prior art rests not

on any individual element or function but in the very combination itself -- that is, in the substitution of "the total amount of hours paid to the technician divided into the total labor sales for a given period" of Edwards, for *dividing the total shop production hours by the estimated total labor hours*. Therefore at the time of the invention, it would have been obvious to one of ordinary skill in the art to make a simple substitution of one known element for another producing a predictable result renders the claim obvious.

**Claim 2:**

The combination of McGuire / Inoue / Edwards teaches the limitations of Claim 1, as explained above. Furthermore, McGuire as shown discloses the following limitations:

- *wherein the step of determining the total shop production hours is further defined as determining a shop start period equal to the vehicle production start period, and determining a shop finish period equal to the vehicle production finish period* (see at least Figure 2C, column 9, lines 41-68 and column 14, lines 9-20, which Figure 2C illustrates a "Daily Recap" which "[t]he daily recap can be performed at any time, although it is assumed that the daily recap will be performed at the end of a working day" (e.g., shop finish period) "or at the beginning of the next working day"(e.g., shop start period). McGuire suggests that during a daily recap, the operator have information for example total sales, work orders completed (e.g., vehicle production periods) and service history, which it is implicitly disclosed that includes when the repair shop start end finish period each day including all the services and work orders completed (e.g., vehicle production start and finish period) because "[t]he system permits the operator to produce a tally of daily operations and work in progress to assist in maintaining an efficient service operation". Furthermore, a daily recap display "work in progress, a monthly summary of work performed" (e.g., total shop production days in addition to hours), "a service history for individual vehicles or a class of vehicles, a display of present work in progress, and a recap of parts failure history." It is implicitly disclosed that the vehicle production start period

is equal to a shop start period and the vehicle finish period is equal to a shop finish period in order to determine productive hours when technicians are performing repairs to a vehicle with the purpose to monitor and measure these productive periods);

**Claim 3:**

The combination of McGuire / Inoue / Edwards teaches the limitations of Claim 2, as explained above. Furthermore, McGuire as shown discloses the following limitations:

- *wherein the step of determining the total shop production hours is further defined as determining the number of days between the shop start period and the shop finish period* (see at least column 9, lines 41-60 and column 14, lines 9-20, which teaches that “[t]he daily recap can be performed at any time, although it is assumed that the daily recap will be performed at the end of a working day” (e.g., shop finish period) “or at the beginning of the next working day”(e.g., shop start period). McGuire suggests that during a daily recap the operator determines the number of days between the shop start and finish period, because “[t]he system permits the operator to produce a tally of daily operations and work in progress to assist in maintaining an efficient service operation”. Furthermore, a daily recap display “work in progress, a monthly summary of work performed” (e.g., total shop production days in addition to hours), “a service history for individual vehicles or a class of vehicles, a display of present work in progress, and a recap of parts failure history.”);

Furthermore, McGuire teaches that “[b]y requesting the labor update option, the dealer can enter the number of hours assigned to that vehicle and the labor rate from the dealer's labor file will be applied to that work order for later invoicing.”

**Claim 4:**

The combination of McGuire / Inoue / Edwards teaches the limitations of Claim 3, as explained above. Furthermore, McGuire as shown discloses the following limitations:

- *wherein if the number of days between the shop start period and the shop finish period is equal to one day, then the step of determining the total shop production hours is further defined calculating the number of hours between the shop start period and the shop finish period* (see at least column 9, lines 41-60 and column 14, lines 9-20, which teaches that “[t]he daily recap can be performed at any time, although it is assumed that the daily recap will be performed at the end of a working day” (e.g., shop finish time period) “or at the beginning of the next working day”(e.g., shop start time period). McGuire suggests that during a daily recap the operator is monitoring the performance of that day because “[t]he system permits the operator to produce a tally of daily operations and work in progress to assist in maintaining an efficient service operation”. Furthermore, a daily recap display “work in progress, a monthly summary of work performed” (e.g., total shop production days in addition to hours), “a service history for individual vehicles or a class of vehicles, a display of present work in progress, and a recap of parts failure history.”);

McGuire does not explicitly disclosed to calculate one day in hours, therefore, it would have been obvious to try, by one of ordinary skill in the art at the time of the invention was made, to convert one day in hours which is well known in the art and to incorporate it into the method of McGuire since there are a finite number of identified, predictable potential solutions (e.g., measure production in terms of days in addition to hours) to the recognized need (process production efficiency) and one of ordinary skill in the art could have pursued the known potential solutions with a reasonable expectation of success (a process production efficiency calculated in terms of days or hours).

**Claim 5:**

The combination of McGuire / Inoue / Edwards teaches the limitations of Claim 3, as explained above. Furthermore, McGuire as shown discloses the following limitations:

- *wherein if the number of days between the shop start period and the shop finish period is equal to two days, then the step of determining the total shop production hours is further defined as calculating the number of hours between the shop start period and a shop closing time for a first day to define a first day period and calculating the number of hours between a shop opening time for a second day and the shop finish period to define a second day period, and then adding the hours of the first day period to the hours of the second day period (see at least column 9, lines 41-62 and column 14, lines 9-20, which teaches that “[t]he daily recap can be performed at any time, although it is assumed that the daily recap will be performed at the end of a working day” (e.g., shop finish time period, shop closing time) “or at the beginning of the next working day”(e.g., shop start time period, shop opening time). McGuire suggests that during a daily recap the operator determines the number of days between the shop start and finish period, because “[t]he system permits the operator to produce a tally of daily operations and work in progress to assist in maintaining an efficient service operation”. Furthermore, a daily recap display “work in progress, a monthly summary of work performed” (e.g., total shop production days in addition to hours), “a service history for individual vehicles or a class of vehicles, a display of present work in progress, and a recap of parts failure history.” McGuire suggests that “for those jobs that are incomplete, the original date of the work order will be printed” therefore, a daily recap includes more than one day of production);*

McGuire does not explicitly disclosed to calculate one day in hours, therefore, it would have been obvious to try, by one of ordinary skill in the art at the time of the invention was made, to convert one day in hours which is well known in the art and to incorporate it into the method of McGuire since there are a finite number of identified, predictable potential solutions (e.g.,

measure production in terms of days in addition to hours) to the recognized need (process production efficiency) and one of ordinary skill in the art could have pursued the known potential solutions with a reasonable expectation of success (a process production efficiency calculated in terms of days or hours).

**Claim 6:**

The combination of McGuire / Inoue / Edwards teaches the limitations of Claim 3, as explained above. Furthermore, McGuire as shown discloses the following limitations:

- *wherein if the number of days between the shop start period and the shop finish period is greater than two days, then the step of determining the total shop production hours is further defined as calculating the number of hours between the shop start period and a shop closing time for a first day to define a first day period, calculating the number of hours between a shop opening time for a last day and the shop finish period to define a last day period, and calculating the number of hours between shop opening and closing times for each day between the first and last day periods to define a middle day period, and then adding together the hours of the first day period, the middle day period, and the last day period* (see at least column 9, lines 41-62 and column 14, lines 9-20, which teaches that “[t]he daily recap can be performed at any time, although it is assumed that the daily recap will be performed at the end of a working day” (e.g., shop finish time period, shop closing time) “or at the beginning of the next working day”(e.g., shop start time period, shop opening time). McGuire suggests that during a daily recap the operator determines the number of days between the shop start and finish period, because “[t]he system permits the operator to produce a tally of daily operations and work in progress to assist in maintaining an efficient service operation”. Furthermore, a daily recap display “work in progress, a monthly summary of work performed” (e.g., total shop production days in addition to hours), “a service history for individual vehicles or a class of vehicles, a display of present work in progress, and a recap of

parts failure history." McGuire suggests that "for those jobs that are incomplete, the original date of the work order will be printed" therefore, a daily recap includes more than one day of production);

McGuire does not explicitly disclose to calculate one day in hours, therefore, it would have been obvious to try, by one of ordinary skill in the art at the time of the invention was made, to convert one day in hours which is well known in the art and to incorporate it into the method of McGuire since there are a finite number of identified, predictable potential solutions (e.g., measure production in terms of days in addition to hours) to the recognized need (process production efficiency) and one of ordinary skill in the art could have pursued the known potential solutions with a reasonable expectation of success (a process production efficiency calculated in terms of days or hours).

**Claim 7:**

The combination of McGuire / Inoue / Edwards teaches the limitations of Claim 1, as explained above. Furthermore, McGuire as shown discloses the following limitations:

- *wherein the step of determining the vehicle production start period is further defined as determining a vehicle production start date and a vehicle production start time based upon a date and time that the repair process of the identified vehicle begins* (see at least column 2, lines 63-66, column 9, lines 41-60 and column 14 lines 9-20, which McGuire provides a "work flow involved in diagnosing and servicing a vehicle from the time a customer arrives for an estimate of charges until the invoice has been completed for that vehicle" where work orders are created in order to begin the vehicle reparation which McGuire suggests that in each work order, date and time are included when a vehicle reparation process start and finish in order to calculate a labor cost based on each work order. Furthermore, a "daily recap can be performed at any time" where the operator have access to work orders completed information which it is implicitly disclosed that date and time information

are included in the service history when a repair process began and when it was finished);

**Claim 8:**

The combination of McGuire / Inoue / Edwards teaches the limitations of Claim 1, as explained above. Furthermore, McGuire as shown discloses the following limitations:

- *wherein the step of determining the vehicle production finish period is further defined as determining a vehicle production finish date and a vehicle production finish time based upon a date and time that the repair process of the identified vehicle ends* (see at least column 2, lines 63-66, column 9, lines 41-60 and column 14 lines 9-20, which McGuire provides a “work flow involved in diagnosing and servicing a vehicle from the time a customer arrives for an estimate of charges until the invoice has been completed for that vehicle” where work orders are created in order to begin the vehicle reparation which McGuire suggests that in each work order, date and time are included when a vehicle reparation process start and finish in order to calculate a labor cost based on each work order. Furthermore, a “daily recap can be performed at any time” where the operator have access to work orders completed information which it is implicitly disclosed that date and time information are included in the service history when a repair process began and when it was finished);

**Claim 9:**

The combination of McGuire / Inoue / Edwards teaches the limitations of Claim 8, as explained above. Furthermore, McGuire as shown discloses the following limitations:

- *wherein the step of determining the total shop production hours is further defined as determining the total shop production hours based upon when the shop opened and closed for each day between the vehicle production start date and time and the vehicle production finish date and time* (see at least Figure 2C, column 9, lines 41-

68 and column 14, lines 9-20, which Figure 2C illustrates a “Daily Recap” which “[t]he daily recap can be performed at any time, although it is assumed that the daily recap will be performed at the end of a working day” (e.g., repair shop closing time) “or at the beginning of the next working day”(e.g., repair shop opening time). McGuire suggests that during a daily recap, the user have information for example total sales, work orders completed (e.g., vehicle production start/finish date and time) and service history, which it is implicitly disclosed that includes when the repair shop opens and closes each day with all the services and work orders completed (e.g., vehicle production start/finish date and time), because “[t]he system permits the operator to produce a tally of daily operations and work in progress to assist in maintaining an efficient service operation”. Furthermore, a daily recap display “work in progress, a monthly summary of work performed” (e.g., total shop production hours), “a service history for individual vehicles or a class of vehicles, a display of present work in progress, and a recap of parts failure history.”);

**Claim 10:**

The combination of McGuire / Inoue / Edwards teaches the limitations of Claim 8, as explained above. Furthermore, McGuire as shown discloses the following limitations:

- *wherein the step of determining the total shop production hours is further defined as determining a shop start date and time equal to the vehicle production start date and time, respectively, and determining a shop finish date and time equal to the vehicle production finish date and time, respectively* (see at least Figure 2C, column 9, lines 41-68 and column 14, lines 9-20, which Figure 2C illustrates a “Daily Recap” which “[t]he daily recap can be performed at any time, although it is assumed that the daily recap will be performed at the end of a working day” (e.g., shop finish date and time period) “or at the beginning of the next working day”(e.g., shop start date and time period). McGuire suggests that during a daily recap, the

operator have information for example total sales, work orders completed (e.g., vehicle production start/finish date and time) and service history, which it is implicitly disclosed that includes when the repair shop start and finish period of each day containing time and date of all the services and work orders completed (e.g., vehicle production start/finish date and time) because “[t]he system permits the operator to produce a tally of daily operations and work in progress to assist in maintaining an efficient service operation”. Furthermore, a daily recap display “work in progress, a monthly summary of work performed” (e.g., total shop production days in addition to hours), “a service history for individual vehicles or a class of vehicles, a display of present work in progress, and a recap of parts failure history.” It is implicitly disclosed that the vehicle production start date and time is equal to a shop start date and time and the vehicle finish date and time is equal to a shop finish date and time in order to determine productive hours when technicians are performing repairs to a vehicle with the purpose to monitor and measure these productive periods);

**Claim 11:**

The combination of McGuire / Inoue / Edwards teaches the limitations of Claim 10, as explained above. Furthermore, McGuire as shown discloses the following limitations:

- *wherein the step of determining the total shop production hours is further defined as determining the number of days between the shop start date and the shop finish date* (see at least column 9, lines 41-60 and column 14, lines 9-20, which teaches that “[t]he daily recap can be performed at any time, although it is assumed that the daily recap will be performed at the end of a working day” (e.g., shop finish period) “or at the beginning of the next working day”(e.g., shop start period). McGuire suggests that during a daily recap the operator determines the number of days between the shop start date and finish date, because “[t]he system permits the operator to produce a tally of daily operations and work in progress to assist in

maintaining an efficient service operation". Furthermore, a daily recap display "work in progress, a monthly summary of work performed" (e.g., total shop production days in addition to hours), "a service history for individual vehicles or a class of vehicles, a display of present work in progress, and a recap of parts failure history.");

Furthermore, McGuire teaches that "[b]y requesting the labor update option, the dealer can enter the number of hours assigned to that vehicle and the labor rate from the dealer's labor file will be applied to that work order for later invoicing."

**Claim 12**

As per **Claim 12**, this claim encompasses substantially the same scope as claim 4. Accordingly, claim 12 is rejected in substantially the same manner as claim 4, as described above.

**Claim 13**

As per **Claim 13**, this claim encompasses substantially the same scope as claim 5. Accordingly, claim 13 is rejected in substantially the same manner as claim 5, as described above.

**Claim 14**

As per **Claim 14**, this claim encompasses substantially the same scope as claim 6. Accordingly, claim 14 is rejected in substantially the same manner as claim 6, as described above.

**Claim 15:**

The combination of McGuire / Inoue / Edwards teaches the limitations of Claim 1, as explained above. Furthermore, McGuire as shown discloses the following limitations:

- *wherein the vehicle production start period is further defined as having a vehicle production start date and time, and the vehicle production finish period is further defined as having a vehicle production finish date and time, and further including the step of calculating the days between the vehicle production start date and time and the vehicle production finish date and time to determine a number of days for a total vehicle production (see at least column 2, lines 63-66column 9, lines 41-60 and column 14, lines 9-20, which McGuire provides a "work flow involved in*

diagnosing and servicing a vehicle from the time a customer arrives for an estimate of charges until the invoice has been completed for that vehicle” where work orders are created in order to begin the vehicle reparation which McGuire suggests that in each work order, date and time are included when a vehicle reparation process start and finish in order to calculate a labor cost based on each work order. In addition McGuire teaches that “[t]he daily recap can be performed at any time, although it is assumed that the daily recap will be performed at the end of a working day” (e.g., shop finish period, vehicle production finish period) “or at the beginning of the next working day”(e.g., shop start period, vehicle production start period). McGuire suggests that during a daily recap the operator determines the number of days between the vehicle start date and time period and the vehicle finish date and time period, because “[t]he system permits the operator to produce a tally of daily operations and work in progress to assist in maintaining an efficient service operation”. Furthermore, a daily recap display “work in progress, a monthly summary of work performed” (e.g., total shop production days in addition to hours,), “a service history for individual vehicles” (e.g., total vehicle production) “or a class of vehicles, a display of present work in progress, and a recap of parts failure history.”);

**Claim 16:**

The combination of McGuire / Inoue / Edwards teaches the limitations of Claim 1, as explained above. Furthermore, Inoue as shown discloses the following limitations:

- *wherein the step of estimating the total labor hours to perform the repair process is further defined as estimating a total labor hours to be sold to perform the repair process (see at least Figures 20-21, “Total Operation time”, which they illustrates an estimation of total labor hours to be sold in order to perform the repair process);*

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the method of Automotive Diagnostic System of McGuire and the apparatus for calculating a repair cost of a damaged car as taught by Inoue with the shop effective labor rate of Edwards because McGuire, Inoue and Edwards are from the same field of endeavor (vehicle/car repair process). The apparatus for calculating a repair cost of damaged car of Inoue "enables a worker to estimate a repair cost of a damaged car conveniently and accurately." (Inoue, see at least column 1, lines 45-46) Furthermore, Inoue teaches that "the repair cost is obtained from the value of the work item and the part in the section which is selected by the second means. For example, when the value is a work operation time, repair cost is obtained as the results of multiplying a cost per a work operation time by a total of work operation times. When the value is a price, a repair cost is obtained from a total of prices. Thus, a repair cost is estimated with convenience, accuracy and without an error." (Inoue, see at least column 2, lines 35-44).

**Claim 17:**

The combination of McGuire / Inoue / Edwards teaches the limitations of Claim 1, as explained above. Furthermore, Inoue as shown discloses the following limitations:

- *wherein the step of estimating the total labor hours to perform the repair process is further defined as estimating a total metal labor hours plus a total paint labor hours* (see at least Figures 20-21, which Figure 20 illustrates an estimation of total metal labor hours (e.g., "Front Fender Sheet Metal") and Figure 21 illustrates an estimation of total paint labor hours "Coating Operation Time" (e.g., "Color mixing... 1 color"));

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the method of Automotive Diagnostic System of McGuire and the apparatus for calculating a repair cost of a damaged car as taught by Inoue with the shop effective labor rate of Edwards because McGuire, Inoue and Edwards are from the same field of endeavor

(vehicle/car repair process). The apparatus for calculating a repair cost of damaged car of Inoue “enables a worker to estimate a repair cost of a damaged car conveniently and accurately.” (Inoue, see at least column 1, lines 45-46) Furthermore, Inoue teaches that “the repair cost is obtained from the value of the work item and the part in the section which is selected by the second means. For example, when the value is a work operation time, repair cost is obtained as the results of multiplying a cost per a work operation time by a total of work operation times. When the value is a price, a repair cost is obtained from a total of prices. Thus, a repair cost is estimated with convenience, accuracy and without an error.” (Inoue, see at least column 2, lines 35-44).

**Claim 18:**

The combination of McGuire / Inoue / Edwards teaches the limitations of Claim 1, as explained above. Furthermore, McGuire as shown discloses the following limitations:

- *wherein the repair process of the identified vehicle begins when a predetermined event occurs within the repair shop, and wherein the step of determining a vehicle production start period is further defined as determining a vehicle production start period based upon when the predetermined event occurs* (see at least column 2 lines 63-66 and column 9, lines 41-60, which McGuire provides a “work flow involved in diagnosing and servicing a vehicle from the time a customer arrives for an estimate of charges until the invoice has been completed for that vehicle” where work orders are created in order to begin the vehicle reparation (e.g., a predetermined event) which McGuire suggests that in each work order, start and finish period are included in a vehicle reparation process in order to calculate a labor cost based on each work order. It is implicitly disclosed that a vehicle production start when the vehicle arrives to the repair shop after an estimation is made by an operator);

**Claim 19:**

The combination of McGuire / Inoue / Edwards teaches the limitations of Claim 18, as explained above. Furthermore, McGuire as shown discloses the following limitations:

- *wherein the predetermined event is further defined as a technician being assigned to the identified vehicle, and wherein the step of determining a vehicle production start period is further defined as determining a vehicle production start period based upon when the technician is assigned to the identified vehicle* (see at least column 5, line 17, which teaches “Job taken and estimated by” where McGuire suggests that an operator (e.g., a technician) have been assigned to start a job which it is implicitly disclosed that the vehicle start production period initiates when the operator begins to perform the job);

**Claim 20:**

The combination of McGuire / Inoue / Edwards teaches the limitations of Claim 1, as explained above. Furthermore, McGuire as shown discloses the following limitations:

- *wherein the repair process of the identified vehicle ends when a predetermined event occurs within the repair shop, and wherein the step of determining a vehicle production finish period is further defined as determining a vehicle production finish period based upon when the predetermined event occurs* (see at least Figure 2C, column 2 lines 63-66 and column 9, lines 41-60, which Figure 2C illustrates the invoicing in order to release the customer vehicle at the end of day, furthermore McGuire provides a “work flow involved in diagnosing and servicing a vehicle from the time a customer arrives for an estimate of charges until the invoice has been completed for that vehicle” where invoices are created in order to release the vehicle customer vehicle (e.g., a predetermined event) which McGuire suggests that in each invoice, start and finish period are included in a vehicle reparation process in order to calculate a labor cost based on each work order. It is implicitly

disclosed that a vehicle production finish when the vehicle is released to the customer);

**Claim 21:**

The combination of McGuire / Inoue / Edwards teaches the limitations of Claim 20, as explained above. Furthermore, McGuire as shown discloses the following limitations:

- *wherein the predetermined event is further defined as a technician being unassigned to the identified vehicle, and wherein the step of determining a vehicle production finish period is further defined as determining a vehicle production finish period based upon when the technician is unassigned to the identified vehicle* (see at least column 5, line 17, which teaches that in the invoice "Job taken and estimated by" where McGuire suggests that an operator (e.g., a technician) have been unassigned to a job when the technician finished the repair job, which it is implicitly disclosed that the vehicle finish production period ends when the operator complete the job and he/she is available for another repair job);

**Claim 22:**

The combination of McGuire / Inoue / Edwards teaches the limitations of Claim 1, as explained above. Furthermore, Inoue as shown discloses the following limitations:

- *wherein the steps are repeated for a plurality of identified vehicles each having a separate repair process in the same repair shop* (see at least column 1, line 44 and Figure 2, which it illustrates "Input code number of a car model" where the operator input and identify a vehicle for repairing by selecting: "Select damage type" and "Select section to be repaired". Inoue suggests that a plurality of identified vehicles are repaired in the same repair shop because calculate "a repair cost of a damaged car". It is implicitly disclosed that the apparatus calculate repair cost to more than one car and the apparatus is appropriate to work in a plurality of different repair shops);

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the method of Automotive Diagnostic System of McGuire and the apparatus for calculating a repair cost of a damaged car as taught by Inoue with the shop effective labor rate of Edwards because McGuire, Inoue and Edwards are from the same field of endeavor (vehicle/car repair process). The apparatus for calculating a repair cost of damaged car of Inoue "enables a worker to estimate a repair cost of a damaged car conveniently and accurately." (Inoue, see at least column 1, lines 45-46) Furthermore, Inoue teaches that "the repair cost is obtained from the value of the work item and the part in the section which is selected by the second means. For example, when the value is a work operation time, repair cost is obtained as the results of multiplying a cost per a work operation time by a total of work operation times. When the value is a price, a repair cost is obtained from a total of prices. Thus, a repair cost is estimated with convenience, accuracy and without an error." (Inoue, see at least column 2, lines 35-44).

**Claim 26:**

As per **Claim 26**, this claim encompasses substantially the same scope as claim 22. Accordingly, claim 26 is rejected in substantially the same manner as claim 22, as described above.

**Claim 30:**

The combination of McGuire / Inoue / Edwards teaches the limitations of Claim 1, as explained above. Furthermore, Inoue as shown discloses the following limitations:

- *further including the step of performing the repair process on the identified vehicle* (see at least Figure 2, which it illustrates "Input code number of a car model" where the operator input and identify a vehicle for repairing by selecting: "Select damage type", "Select section to be repaired" and "Select repair work item". Inoue suggests that the repair process is performed on the identified vehicle);

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the method of Automotive Diagnostic System of McGuire and the apparatus

for calculating a repair cost of a damaged car as taught by Inoue with the shop effective labor rate of Edwards because as explained above in Claim 22.

**Claim 31:**

The combination of McGuire / Inoue / Edwards teaches the limitations of Claim 30, as explained above. Furthermore, McGuire as shown discloses the following limitation:

- *a testing step (see at least Figure 2B, Diagnosis/Repair, which it illustrates a Motor Analyzer at the initial and final diagnosis);*

In addition, Inoue as shown discloses the following limitations:

- *wherein the step of performing the repair process is further defined as performing at least one of a disassembly step, a frame repair step, a metal repair step, a preparation step, a painting step, a reassembly step, and a detailing step (see at least Figures 9, 10 and 20-21, which Figure 9, illustrates a fender repair work item, Figure 10 illustrates “Select parts to be repaired and parts to be fabricated” (e.g., disassembly and reassembly step), Figure 20 illustrates a “Description of repair technical fee” which include a metal repair step (e.g., “Front Fender Sheet Metal”) and Figure 21 illustrates “Coating Technical Fee” which include a painting step);*

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the method of Automotive Diagnostic System of McGuire and the apparatus for calculating a repair cost of a damaged car as taught by Inoue with the shop effective labor rate of Edwards because as explained above in Claim 22.

**Claim 32:**

The combination of McGuire / Inoue / Edwards teaches the limitations of Claim 20, as explained above. Furthermore, McGuire as shown discloses the following limitation:

- *wherein the step of creating a vehicle identifier is further defined as creating a vehicle identifier based upon at least one of a vehicle brand data, a vehicle*

*year data, a customer identifying data, and a repair order data* (see at least Figure 1, which it illustrates "Vehicle Data" and "Vehicle Data and Information" and column 5 lines 1-55, which McGuire teaches that when a work order is created, it includes the repair order data, the "Customer Name", "Address", "Make, year and model" of the vehicle);

15. Claims 23-25 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of McGuire / Inoue / Edwards in view of **Official Notice**.

The combination of McGuire / Inoue / Edwards teaches the limitations of Claims 22 and 26, as explained above. Furthermore, Edwards discloses "[i]f the average estimate written..." which Edwards suggests an average calculation (see at least page 111, 1<sup>st</sup> column, 1<sup>st</sup> ¶). In addition, Edward teaches that a shop effective labor rate is a measurement that "tells you how well the use of different labor rates is being maximized for different repairs" because this measurement considers "the total amount of hours paid to the technician divided into the total labor sales for a given period (usually weekly or monthly)" which Edward suggests that production hours are included in the total amount of hours paid to the technician and the estimated total labor hours are the total labor sold, therefore an efficiency rate is obtained (see at least page 111, Shop Effective Labor Rate).

**Claim 23:**

- *further including the step of calculating an average of the estimated total labor hours for the plurality of identified vehicles in the same repair shop*

**Claim 24:**

- *further including the step of calculating an average of the total shop production hours for the plurality of identified vehicles in the same repair shop.*

**Claim 25:**

- *further including the step of calculating an average of the production process efficiency for the repair processes by dividing the average total shop production hours by the average estimated total labor hours.*

**Claim 27:**

- *further including the step of calculating an average of the estimated total labor hours for the plurality of identified vehicles in the plurality of different repair shops.*

**Claim 28:**

- *further including the step of calculating an average of the total shop production hours for the plurality of identified vehicles in the plurality of different repair shops.*

**Claim 29:**

- *further including the step of calculating an average of the production process efficiency for the repair processes by dividing the average total shop production hours by the average estimated total labor hours.*

With regard to the limitations *calculating an average of the estimated total labor hours, total shop production and production process efficiency*, the Examiner takes **Official Notice** that it is old and well known in statistics and arithmetic and to one of the ordinary skill in the art to calculate average in order to measure and monitor the performance of a process (e.g., a process behavior). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine McGuire / Inoue / Edwards with the old and well-known practice of average calculation because the average calculation measure and monitor the performance of a process. By calculating the average of a process, it shows how data is distributed, therefore the average value is useful to compare it against business standard averages for the same procedure at other facilities (e.g., benchmarking) in order to analyze how well the current process is executed.

### Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Sakai (US 5,485,369) discloses a method and apparatus for compiling data relating to damage extend, panel and chassis member rectification work, painting work and costs.
- Wong (US 5,432,904) discloses a auto repair estimate, text and graphic system.
- Cherrington et al (US 5,657,233) discloses an integrated automated vehicle analysis.
- Kirkevold et al (US 6,263,322 B1) discloses an integrated automotive service system and method.
- Chou et al (US 6,330,499 B1) discloses a system and method for vehicle diagnostics and health monitoring.
- Powers et al (US 5,500,795) discloses a method and system for monitoring and controlling the performance of a call processing center.
- D'Alessandro (US 6,556,974 B1) discloses a method for evaluating current business performance.
- Passwater, **Perplexed by profits**, *Body Shop Business*, Akron: May 1999. Vol. 18, Issue 5, pp. 68-76.
- Rozint, **Taking control of your business**, *Body Shop Business*, Akron: Dec. 1998. Vol. 17, Issue 12, pp. 22, 151-154.

Any inquiry of a general nature or relating to the status of this application or concerning this communication or earlier communications from the Examiner should be directed to **Nadja Chong** whose telephone number is **571.270.3939**. The Examiner can normally be reached on Monday-Friday, 9:30am-5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, **BETH VAN DOREN** can be reached at **571.272.6737**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://portal.uspto.gov/external/portal/pair> <<http://pair-direct.uspto.gov>>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866.217.9197** (toll-free).

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Randolph Building  
401 Dulany Street  
Alexandria, VA 22314.

/Nadja Chong/  
Examiner, Art Unit 3623

3 June 2008

/C. Michelle Tarae/  
Primary Examiner, Art Unit 3623